CLAIMS

1) Device for treating thin-sectioned tissues (6) on a support plate (1) with at least one treatment liquid, characterized in that the support plate (1) is disposed opposite an object support (4) in a treatment position (14) and that several object supports can be automatically placed into this treatment position (14).

2) Device according to claim 1, characterized in that the support plate (1) defines an underside (1b) on which are indicated marking positions (2a) at which are positioned small metal nets (2) with thin-sectioned tissues (2b), and that said support plate (1) defines an upper side (1a) in which are present several holes (3a) in each of which is wedged a magnet (3), said holes (3a) being disposed opposite the marked positions (2a).

3) Device according to claims 1 and 2, characterized in that the positions (2a) for the small metal nets (2) are formed as elevations on the underside (1b) of the support plate (1).

4) Device according to claims 1 and 2, characterized in that the magnets (3) in the holes (3a) on the upper side (1a) of the support plate (1) are permanent magnets or electromagnets.

5) Device according to claims 1 and 2, characterized in that the support plate (1) is made of dimensionally stable material, preferably of aluminum, brass or a fiber-reinforced plastic material.

6) Device according to claims 1 and 2, characterized in that the support plate (1) is treated with a hydrophobic coating on the underside (1b) that carries the small metal nets (2).

7) Device according to claims 1 and 2, characterized in that the marked positions (2a) on the underside (1b) of the support plate (1) on which rest the small metal nets (2) are located opposite the positions of the recesses (5) containing the liquid drops (6) on the upper side (4a) of the object support (4).

8)   Device according to claims 1 and 2, characterized in that the support plate (1) is attached via a holder (9) to the holding head (23) of a conveying device (20) with motor-driven raising and lowering function.

5   9)   Device according to claim 8, characterized in that the conveying device (20) is automatically controlled by an attached computer unit (25) and position sensors (7).

10)   Device according to claim 1, characterized in that the object support (4)
10   defines an upper side (4a) containing free recesses (5) configured for receiving the treatment liquid (6).

11)   Device according to claims 1 and 10, characterized in that the object support (4) is made of transparent, dimensionally stable material, preferably of
15   glass or a fiber-reinforced plastic material.

12)   Device according to claims 1 and 10, characterized in that the object support (4) is treated with a hydrophobic coating on the upper side (4a) that contains the recesses (5).
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13)   Device according to claims 1 and 10, characterized in that the depth of the recesses (5) on the upper side (4a) of the object support (4) is the same as the thickness of the coating layer.

25   14)   Device according to claims 1 and 10, characterized in that the liquid volume of the recesses (5) of the object support (4) amounts to 50 μL and preferably 5 μL.

15)   Device according to claims 1 and 10, characterized in that the treatment
30   liquid is a marking and/or washing solution for carrying out immunological marking techniques for thin-sectioned tissues.

16)   Device according to claims 1 and 10, characterized in that for identification purposes the object support (4) is provided with a data storage device (4c) in the form of a bar code and/or chip.

5   17)   Device according to claims 1 and 10, characterized in that the positions of the recesses (5) with the liquid drops (6) on the upper side (4a) of the object support (4) are arranged opposite the positions of the small metal nets (2) on the underside (1b) of the support plate (1).

10   18)   Device according to claims 1 and 10, characterized in that the object support (4) is disposed on a conveyor (24) which by means of a guiding track (22) and a motor (26) establishes a treatment position.

19)   Device according to claims 1 and 10, characterized in that the control of
15   the conveyor (24) occurs automatically by means of an attached computer unit (25) and position sensors (7).

20)   Device according to claims 1 and 10, characterized in that on the conveyor (24) the object support (4) is provided with a cover (10) that can be automatically
20   at least partly opened, a chamber (11) being created as a result.

21)   Device according to claims 20, characterized in that the chamber (11) is provided with a holder (12) onto which is placed absorbent paper (13) so that high humidity is created in said chamber (11) and so that the evaporation of the
25   liquid drops (6) on the object supports (4) is minimized.

22)   Method for treating thin-sectioned tissues on a support plate (1) with at least one treatment liquid, characterized by the following steps: filling at least one object support (4) on which are present recesses (5) with a treatment liquid (6);
30   bringing the object support (4) into a treatment position; lowering the support plate (1) onto the object support (4) thereby bringing about contact between the treatment liquid (6) and the thin-sectioned tissues (2b), and automatically moving the object support (4) to the next treatment position.

23)   Method according to claim 22, characterized in that the treatment of the thin-sectioned tissues (2b) consists of immunological marking and/or washing steps.

5   24)   Method according to claim 22, characterized in that the treatment of the thin-sectioned tissues (2b) is carried out automatically.

25)   Method according to claim 22, characterized in that the thin-sectioned tissues (2b) are located on small metal nets (2) that rest on marked and raised 10   positions (2a) of the underside (1b) of the support plate (1) of the invention and are kept in place by magnets (3) disposed on the upper side (1a) of the support plate (1).

26)   Method according to claim 22, characterized in that by means of a holder 15   (9) the support plate (1) is fastened to a holding head (23) of a conveying device (20) with automatic raising and lowering function.

27)   Method according to claim 22, characterized in that the recesses (5) located on the upper side (4a) of the object support (4) are filled with a marking 20   and/or washing solution for carrying out immunological marking techniques for thin-sectioned tissues.

28)   Method according to claim 22, characterized in that the conveying device (2) with automatic raising and lowering function brings the object support (4) into 25   a treatment position so that the liquid drops (6) in the recesses (5) on the upper side (4a) of the object support (4) are located exactly opposite the thin-sectioned tissues (2b) on the small metal nets (2) on the underside (1b) of the support plate (1).

30   29)   Method according to claim 22, characterized in that the object support (4) is located on a conveyor (24) that is moved into a treatment position with the aid of a guiding track (22) and a motor (26).

30)   Method according to claim 22, characterized in that the control of the conveying device (20) occurs with the aid of a computer unit (25) and position sensors (7).

5   31)   Method according to claim 22, characterized in that the control of conveying device (20) is adjusted so that the support plate (1a) is brought close to the object support (4), and the thin-sectioned tissues (2b) on the small metal nets (2) come in contact with the liquid drops (6) on the object support (4).

10   32)   Method according to claim 22, characterized in that, before contact occurs between the thin-sectioned tissues (2b) on the support plate (1) and the liquid drops (6) on the object support (4), the cover (10) of the object support (4) is automatically opened at least in part.

15   33)   Method according to claim 22, characterized in that contact between the thin-sectioned tissues (2b) on the support plate (1) and the liquid drops (6) on the object support (4) is maintained over any desired incubation period.

34)   Method according to claim 22, characterized in that at the end of the
20   incubation period the support plate (1) is automatically lifted along the guiding tracks (8), and the object support (4) on the conveyor (24) is automatically brought into another treatment position via a motor-driven guiding track (22).

35)   Method according to claim 22, characterized in that the support plate (1)
25   defines an underside (1b) on which are provided marked positions (2a) on which are located small metal nets (2) with thin-sectioned tissues (2b), and that said support plate (1) defines an upper side (1a) in which there are formed several holes (3a) into each of which is wedged a magnet (3), said holes (3a) being located opposite the marked positions (2a).

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36)   Method according to claim 22, characterized in that the object support (4) defines an upper side (4a) containing free recesses (5) configured for receiving the treatment liquid (6).